What is claimed is:

1.   A numerical controller for controlling a machine according to a machining program, comprising:

a storage device or medium for storing input/output units each including program block data obtained by dividing the machining program and additional information associated with the program block data, said additional information including an effective data length of the program block, front input/output unit data designating an input/output unit immediately preceding each input/output unit and rear input/output unit data designating an input/output unit following each input/output unit in a sequence of the machining program;

a processor for processing the input/output units; and

an interface for inputting/outputting the input/output units between said storage device or medium and said processor.

2.   A numerical controller according to claim 1, wherein said processor reads a first input/output unit including a program block corresponding to a beginning part of the machining program and successively reads input/output units stored in said storage device or medium according to rear input/output unit data in the read input/output unit through said interface, successively executes the program blocks included in the read input/output units.

3.   A numerical controller according to claim 2, wherein when a branch instruction is included in the program block of the input/output unit in execution, said processor reads input/output units preceding the input/output unit in execution using the front input/output unit data and reads input/output units following the input/output unit in execution using the rear input/output unit data to search a line designated by the branch instruction.

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4. A numerical controller according to claim 2, wherein said additional information further includes data specifying an input/output unit including a line designated by a branch instruction, and when the branch instruction is included in the program block of the input/output unit in execution said processor reads the input/output unit specified by the data.

5. A numerical controller according to claim 1, wherein said processor reads only an input/output unit or input/output units to be edited from said storage device or medium through said interface.

6. A numerical controller according to claim 5, wherein said processor reads only an input/output unit to be edited and modifies a program block and an effective data length included in the read input/output unit.

7. A numerical controller according to claim 5, wherein said processor deletes an input/output unit by changing rear input/output unit data of an input/output unit designated by front input/output unit data of the input/output unit to be deleted to rear input/output unit data of the input/output unit to be deleted, and changing front input/output unit data of an input/output unit designated by rear input/output data of the input/output unit to be deleted to the front input/output data of the input/output unit to be deleted.

8. A numerical controller according to claim 5, wherein said processor adds a new input/output unit including program block data and additional information and changes rear input/output unit data of an input/output unit designated by front input/output data of the input/output unit to be added to data specifying the input/output unit to be added, and changes front input/output unit data of an input/output unit designated by the rear input/output data of the input/output unit to be added to data specifying the input/output unit to be added.